APJ IFW 2856

TRANSMITTAL FORM

Application Number	10/621,201
Filing Date	7/16/03
First Named Inventor	KELLEY, RONALD J. ET AL.
Group Art Unit	2856
Examiner Name	JACKSON, ANDRE K.
Total Number of Pages in this Submission	
Attorney Docket No.	CM01568LD01

ENCLOSURES (check all that apply)

- [X] Fee Transmittal Form
- [ ] Fee Attached
- [ ] Amendment/Reply
- [ ] After Final
- [ ] Affidavits/Declaration(s)
- [ ] Extension of time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Documents
- [ ] Response to Missing Parts/ Incomplete Application
- [ ] Response to Missing Parts Under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers (for an Application)
- [ ] Drawing(s)
- [ ] Licensing-Related papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation, Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CDs
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [X] Appeal Communication to Group {Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter (with appropriate copies)
- [ ] Other Enclosure(s) (please identify below)

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Randi L. Karpinia	Registration No.	46,148
Signature	Randi L. Karpinia		
Date	6/3/04		

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage thereon, as first-class mail, in an envelope addressed to: Mail Stop: Appeal Brief, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313

Typed or printed name	Maria E. Rodriguez		
Signature	Maria E. Rodriguez	**Date**	6/3/04

FEE TRANSMITTAL for FY 2004

Patent fees are subject to annual revision

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 330.00

Complete if Known	
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METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account

Deposit Account Number: 50-2117

Deposit Account Name: Motorola, Inc.

The Commissioner is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayment

☒ Charge any additional fee(s) during the pendency of this application, except for issue fee

☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee $	Small Entity Fee Code	Small Entity Fee $	Fee Description	Fee Paid
1001	770	2001	370	Utility filing fee	
1006	770	2006	370	Utility filing fee CPA	
1002	330	2002	165	Design filing fee	
1007	330	2007	165	Design filing fee CPA	
1003	510	2003	255	Plant filing fee	
1004	750	2004	370	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
				SUBTOTAL (1)	($)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

			Extra Claims		Fee from below		Fee Paid
Total Claims	5	-20* =		x	18	=	
Independent Claims	2	-3* =		x	36	=	
Multiple Dependent					280		

Large Entity Fee Code	Large Entity Fee $	Small Entity Fee Code	Small Entity Fee $	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

**or number previously paid, if greater. For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge – late filing fee or oath	
1052	50	2052	25	Surcharge – late Provisional filing	
1053	130	1053	130	Non-English specification	
1812	2520	1812	2520	For filing a request for ex parte Reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1840*	1805	1840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within 1st month	
1252	410	2252	200	Extension for reply within 2nd month	
1253	930	2253	460	Extension for reply within 3rd month	
1254	1450	2254	720	Extension for reply within 4th month	
1255	1970	2255	980	Extension for reply within 5th month	
1401	320	2401	160	Notice of Appeal	
1402	330	2402	160	Filing a brief in support of an appeal	330
1504		1504		Publication fee for early, voluntary, or normal publication	
1403	280	2403	140	Request for oral hearing	
1505	300	1505	300	Publication fee for republication	
1451	1510	1451	1510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1300	2453	640	Petition to revive - unintentional	
1501	1300	2501	640	Utility issue fee (or reissue)	
1502	470	2502	230	Design issue fee	
1503	630	2503	310	Plant issue fee	
1460	130	1460	50	Petitions to the Commissioner	
1808	130	1808	130	Processing fee CFR 1.17(i)	
1807	50	1807	50	Processing fee for provisional appls.	
1806	180	1806	180	Submission of IDS	
8021	40	8021	40	Recording each patent assignment per property (times # of properties)	
1809	750	2809	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	370	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	750	2801	370	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
1814	110	2814	55	Statutory Disclaimer	
Other fee (specify)					

*Reduced by Basic Filing Fee Pd

SUBTOTAL (3) $ 330

SUBMITTED BY		Complete (if applicable)	
Name (Print)	Randi L. Karpinia	Registration No. (Attorney/Agent)	46,148
Signature	Randi L. Karpinia	Telephone:	(954) 723-6449
		Date	6/3/04

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Kelley, Ronald J., et al.	
Serial No. 10/621,201	
Filing Date: 07/16/2003	Examiner: Andre K. Jackson
Title: Means for Measuring the Liquid Level In A Reservoir For A Fuel Cell	Group Art Unit No. 2856
Attorney Docket No. CM01568LD01	Confirmation No. 1076

APPELLANTS' BRIEF UNDER 37 CFR 1.192

Commissioner for Patents
Mail Stop Appeal Brief-Patents
P.O. Box 1450
Alexandria, VA 22313-1450

This is an appeal from the Final Rejection dated April 6, 2004 of Claims 1 and 2, all the claims pending herein and is in furtherance of the Notice of Appeal in this case filed June 3, 2004. The fees required under 37 C.F.R. § 1.17 are taken care of in the accompanying Fee Transmittal. This brief is transmitted in triplicate as required under 37 C.F.R. § 1.192(a).

CONTENTS

I. REAL PARTY IN INTEREST

The undersigned, Randi L. Karpinia, Attorney for the Appellants, certifies the following:

The name of the real party in interest in this appeal is Motorola, Inc., a Delaware corporation. Appellants assigned all their rights, title and interest in and to the above-captioned patent application (hereinafter "Subject Application") to Motorola, Inc. as evidenced by the assignment recorded in the United States Patent and Trademark Office on 7/16/2001 at Reel No. 012031, Frame No. 0557.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals of interferences known to the Applicant, the Applicant's legal representative, or assignee which would directly affect or be directly affected by or having a bearing on the Board's decision in this pending appeal.

III. STATUS OF THE CLAIMS

Claims 1 and 2 are pending herein and all are appealed.

Claims 1 and 2 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689).

Claims 1 and 2 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077).

IV. STATUS OF THE AMENDMENTS

There have not been any amendments to the claims filed subsequent to the final rejection, dated April 6, 2004.

V. SUMMARY OF THE INVENTION

In a first embodiment, the present invention provides for a fuel cell system for a portable electronic device including a fuel cell capable of operating on hydrogen that is obtained from methanol; and a reservoir for storing a supply of methanol, suitably connected to the fuel cell, wherein a fuel quantity measuring means is located within the reservoir. The fuel quantity measuring means includes an immersion capacitive unit comprised of a plurality of pairs of plates placed in more than one location within the reservoir, wherein the supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric.

In a second embodiment, the present invention provides for a fuel cell system for a portable electronic device including a fuel cell that operates on hydrogen obtained from a liquid hydrocarbon fuel; and a reservoir for containing a supply of the liquid hydrocarbon fuel, said reservoir connected to the fuel cell, wherein a sensing means for measuring the amount of liquid hydrocarbon fuel that is present is located within the reservoir. The sensing means includes an immersion capacitive unit comprised of a plurality of pairs of plates placed in more than one location within the reservoir, wherein a supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric.

VI. ISSUES FOR CONSIDERATION ON APPEAL

1. Whether Claims 1 and 2 are unpatentable under 35 U.S.C. 103(a) as being obvious over Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689).

2. Whether Claims 1 and 2 are unpatentable under 35 U.S.C. 103(a) as being obvious over Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077).

VII. GROUPING OF THE CLAIMS

Claims 1 and 2 stand alone and do not stand or fall together. The claims are grouped individually, and in the appropriate part or parts of the arguments below reasons as to why Appellants consider the rejected claims to be separately patentable are presented.

VIII. ARGUMENTS

1. Whether Claims 1 and 2 are unpatentable under 35 U.S.C. 103(a) as being obvious over Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689).

A) HOCKADAY (US PATENT NUMBER 5,759,712) IN VIEW OF HAMPO ET AL. (US PATENT NUMBER 5,747,689)TAKEN SINGLY OR IN COMBINATION DO NOT ANTICIPATE THE INVENTION AS RECITED IN CLAIMS 1 AND 2.

Regarding Claim 1, the present invention as recited in claim 1 is a fuel cell system for a portable electronic device including a reservoir and a "fuel quantity measuring means" located within the reservoir. The fuel quantity measuring means includes "an immersion capacitive unit, wherein the immersion capacitive unit comprises a plurality of pairs of plates placed in more than one location within the reservoir, wherein the supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric."

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689) does not anticipate the invention recited in Claim 1. Applicant respectfully disagrees with the examiner that a reservoir is described in Hockaday. The Examiner's rejection regarding Claim 1 states that Hockaday discloses "a reservoir for storing a supply of methanol (Figure 13)." Applicants respectfully submit that the reference to Figure 13 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. Further, upon review of the specification description of Figure 13 (ie: column 11, lines 3 to 28), Applicants did not find reference to a reservoir for storing a supply of methanol. According to the Merriam-Webster On Line Dictionary, the definition of reservoir

is "1: a place where something is kept in store: as a: an artificial lake where water is collected and kept in quantity for use b: a part of an apparatus in which a liquid is held c : SUPPLY, STORE <a large reservoir of educated people>." In Hockaday, Figure 13, there is no such "apparatus where liquid hydrocarbon fuel is held" recited nor described. Applicant notes the fuel filled fuel tank 119 of Hockaday is not a reservoir in that the fuel tank is punctured by a fuel needle to make the fuel connection. This is neither related nor anticipatory of a reservoir for storing a supply of methanol.

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689) does not anticipate the invention recited in Claim 1. Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689) does not anticipate the immersion capacitive unit comprising ***multiple pairs of plates located at different locations within the reservoir.*** Applicant submits that the Hampo patent actually teaches away from the present invention since in Hampo there is no attempt or intention to utilize multiple pairs of plates located in different areas of the reservoir. Hampo, in contrast, describes "A fluid level sensor 26 includes two parallel electrically-insulating plates 28 and 30." (see FIG. 1 and col. 2 lines 36-37).

Regarding Claim 2, the present invention as recited in Claim 2 is a fuel cell system for a portable electronic device including a reservoir and "a sensing means for measuring the amount of liquid hydrocarbon fuel that is present is located within the reservoir." The sensing means includes "an immersion capacitive unit, wherein the immersion capacitive unit comprises a plurality of pairs of plates placed in more than one location within the reservoir, wherein a supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric."

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689) does not anticipate the invention recited in Claim 2. Applicant respectfully disagrees with the examiner that a reservoir is described in Hockaday. The Examiner's rejection regarding Claim 1 states that Hockaday discloses "a reservoir for storing a supply of liquid hydrocarbon fuel (Figure 13)." Applicants respectfully submit that the reference to Figure 13 is a vague and ambiguous reference; thereby not pointing out the

particular part relied upon as nearly as possible. Further, upon review of the specification description of Figure 13 (ie: column 11, lines 3 to 28), Applicants did not find reference to a reservoir for storing a supply of liquid hydrocarbon fuel. According to the Merriam-Webster On Line Dictionary, the definition of reservoir is "1: a place where something is kept in store: as a: an artificial lake where water is collected and kept in quantity for use b: a part of an apparatus in which a liquid is held c : SUPPLY, STORE <a large reservoir of educated people>." In Hockaday, Figure 13, there is no such "apparatus where liquid hydrocarbon fuel is held" recited nor described. Applicant notes the fuel filled fuel tank 119 of Hockaday is not a reservoir in that the fuel tank is punctured by a fuel needle to make the fuel connection. This is neither related nor anticipatory of a reservoir for storing a supply of liquid hydrocarbon fuel.

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689) does not anticipate the invention recited in Claim 2. Hockaday (US patent number 5,759,712) in view of Hampo et al. (US patent number 5,747,689) does not anticipate the immersion capacitive unit comprising ***multiple pairs of plates located at different locations within the reservoir.*** Applicant submits that the Hampo patent actually teaches away from the present invention since in Hampo there is no attempt or intention to utilize multiple pairs of plates located in different areas of the reservoir. Hampo, in contrast, describes "A fluid level sensor 26 includes two parallel electrically-insulating plates 28 and 30." (see FIG. 1 and col. 2 lines 36-37).

B) THE EXAMINER HAS NOT MET THE PATENT OFFICE'S BURDEN OF PRESENTING A PRIMA FACIE CASE OF OBVIOUSNESS AS REQUIRED BY 37 CFR 1.104 (C) (2) OF CLAIMS 1 AND 2 AS BEING UNPATENTABLE UNDER 35 U.S.C. 103(A) HOCKADAY (US PATENT NUMBER 5,759,712) IN VIEW OF HAMPO ET AL. (US PATENT NUMBER 5,747,689).

Applicants respectfully submit that the Examiner has not met the Patent Office's burden of presenting a prima facie case of obviousness as required by 37 CFR 1.104 (c) (2) as reproduced below:

> "In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions

other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."

Firstly, the examiner's burden to particularly point out the relevant parts relied upon is not met in the office action rejection. "When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as possible."

In the office action dated April 6, 2004, the Examiner's rejection of Claims 1 and 2 each state that Hockaday discloses "a reservoir for storing a supply of methanol (Figure 13)" with reference to Claim 1 and "a reservoir for storing a supply of liquid hydrocarbon fuel (Figure 13)" with respect to Claim 2. Applicants respectfully submit that the reference to Figure 13 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. In Hockaday, Figure 13, there is no such "apparatus where methanol is held" nor "apparatus where liquid hydrocarbon fuel is held" recited nor described. Applicant notes the fuel filled fuel tank 119 of Hockaday is not a reservoir in that the fuel tank is punctured by a fuel needle to make the fuel connection. This is neither related nor anticipatory of a reservoir for holding methanol or a reservoir for holding liquid hydrocarbon fuel.

Further, in the office action dated April 6, 2004, the Examiner's rejection of Claims 1 and 2 state that Hampo discloses "where the quantity measuring means is located within the reservoir; where the quantity measuring means is an immersion capacitive unit and where the immersion capacitive unit includes a plurality of pairs of plates in more than one location within the reservoir that includes an electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric (Figure 1). Applicant respectfully submits that the reference to Figure 1 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. Further, in Hampo, there is no such "immersion capacitive unit includes a plurality of pairs of plates in more than one location" recited nor described with respect to Figure 1.

Since the Patent Office bears the initial duty of supplying a factual basis supporting a rejection in a patent application, and the Examiner has not met this initial duty as described above, Applicants respectfully request the rejection of Claims 1 and 2 be withdrawn and Claims 1 and 2 now be passed to allowance.

2. *Whether Claims 1 and 2 are unpatentable under 35 U.S.C. 103(a) as being obvious over Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077).*

A) HOCKADAY (US PATENT NUMBER 5,759,712) IN VIEW OF POPE (US PATENT NUMBER 4,589,077).TAKEN EITHER SINGLY OR IN COMBINATION DO NOT ANTICIPATE THE INVENTION AS RECITED IN CLAIMS 1 AND 2.

Regarding Claim 1, the present invention as recited in claim 1 is a fuel cell system for a portable electronic device including a reservoir and a "fuel quantity measuring means" located within the reservoir. The fuel quantity measuring means includes "an immersion capacitive unit, wherein the immersion capacitive unit comprises a plurality of pairs of plates placed in more than one location within the reservoir, wherein the supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric."

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077) does not anticipate the invention recited in Claim 1. Applicant respectfully disagrees with the examiner that a reservoir is described in Hockaday. The Examiner's rejection regarding Claim 1 states that Hockaday discloses "a reservoir for storing a supply of methanol (Figure 13)." Applicants respectfully submit that the reference to Figure 13 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. Further, upon review of the specification description of Figure 13 (ie: column 11, lines 3 to 28), Applicants did not find reference to a reservoir for storing a supply of methanol. According to the Merriam-Webster On Line Dictionary, the definition of reservoir is "1: a place where something is kept in store: as a: an artificial lake where water is collected and kept in quantity for use b: a part of an apparatus in which a liquid is held c : SUPPLY,

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Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077) does not anticipate the invention recited in Claim 1. Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077) does not anticipate the immersion capacitive unit comprising ***multiple pairs of plates located at different locations within the reservoir.*** Applicant submits that the Pope patent actually teaches away from the present invention since in Pope there is no attempt or intention to utilize multiple pairs of plates located in different areas of the reservoir. Pope, in contrast, describes a single "multiple segment capacitance probe 12" (see FIG. 1 and col. 3 lines 40-49). The multiple segment capacitance probe 12 does appear to have plates 39 for mounting of temperature sensors 37, however, these are not the same as plates located in different areas to measure capacitance. Instead, they are just mechanical support for the mounting of the temperature sensors. (see FIG. 1 and col. 4, line 38)

Regarding Claim 2, the present invention as recited in Claim 2 is a fuel cell system for a portable electronic device including a reservoir and "a sensing means for measuring the amount of liquid hydrocarbon fuel that is present is located within the reservoir." The sensing means includes "an immersion capacitive unit, wherein the immersion capacitive unit comprises a plurality of pairs of plates placed in more than one location within the reservoir, wherein a supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric."

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077) does not anticipate the invention recited in Claim 2. Applicant respectfully disagrees with the examiner that a reservoir is described in Hockaday. The Examiner's rejection regarding Claim 1 states that Hockaday discloses "a reservoir for storing a supply of liquid hydrocarbon fuel (Figure 13)." Applicants respectfully submit that the

reference to Figure 13 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. Further, upon review of the specification description of Figure 13 (ie: column 11, lines 3 to 28), Applicants did not find reference to a reservoir for storing a supply of liquid hydrocarbon fuel. According to the Merriam-Webster On Line Dictionary, the definition of reservoir is "1: a place where something is kept in store: as a: an artificial lake where water is collected and kept in quantity for use b: a part of an apparatus in which a liquid is held c : SUPPLY, STORE <a large reservoir of educated people>." In Hockaday, Figure 13, there is no such "apparatus where liquid hydrocarbon fuel is held" recited nor described. Applicant notes the fuel filled fuel tank 119 of Hockaday is not a reservoir in that the fuel tank is punctured by a fuel needle to make the fuel connection. This is neither related nor anticipatory of a reservoir for storing a supply of liquid hydrocarbon fuel.

Applicant respectfully submits that Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077) does not anticipate the invention recited in Claim 2. Hockaday (US patent number 5,759,712) in view of Pope (US patent number 4,589,077) does not anticipate the immersion capacitive unit comprising ***multiple pairs of plates located at different locations within the reservoir.*** Applicant submits that the Pope patent actually teaches away from the present invention since in Pope there is no attempt or intention to utilize multiple pairs of plates located in different areas of the reservoir. Pope, in contrast, describes a single "multiple segment capacitance probe 12" (see FIG. 1 and col. 3 lines 40-49). The multiple segment capacitance probe 12 does appear to have plates 39 for mounting of temperature sensors 37, however, these are not the same as plates located in different areas to measure capacitance. Instead, they are just mechanical support for the mounting of the temperature sensors. (see FIG. 1 and col. 4, line 38)

B) THE EXAMINER HAS NOT MET THE PATENT OFFICE'S BURDEN OF PRESENTING A PRIMA FACIE CASE OF OBVIOUSNESS AS REQUIRED BY 37 CFR 1.104 (C) (2) OF CLAIMS 1 AND 2 AS BEING UNPATENTABLE UNDER 35 U.S.C. 103(A) OVER HOCKADAY (US PATENT NUMBER 5,759,712) IN VIEW OF POPE (US PATENT NUMBER 4,589,077).

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> "In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."

Firstly, the examiner's burden to particularly point out the relevant parts relied upon is not met in the office action rejection. "When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as possible."

In the office action dated April 6, 2004, the Examiner's rejection of Claims 1 and 2 each state that Hockaday discloses "a reservoir for storing a supply of methanol (Figure 13) with respect to Claim 1 and "a reservoir for storing a supply of liquid hydrocarbon fuel (Figure 13)" with respect to Claim 2. Applicants respectfully submit that the reference to Figure 13 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. In Hockaday, Figure 13, there is no such "apparatus where methanol is held" nor "apparatus for storing a supply of liquid hydrocarbon fuel" recited nor described. Applicant notes the fuel filled fuel tank 119 of Hockaday is not a reservoir in that the fuel tank is punctured by a fuel needle to make the fuel connection. This is neither related nor anticipatory of a reservoir for holding methanol or for holding liquid hydrocarbon fuel.

Further, in the office action dated April 6, 2004, the Examiner's rejection of Claims 1 and 2 state that Pope discloses "where the fuel quantity measuring means is located within the reservoir; where the quantity measuring means is an immersion capacitive unit and where the immersion capacitive unit includes a plurality of pairs of plates in more than one location within the reservoir that includes an electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric (Figure 1). Applicant respectfully submits that the reference to Figure 1 is a vague and ambiguous reference; thereby not pointing out the particular part relied upon as nearly as possible. Further, in Pope, there is no such "immersion capacitive unit includes a plurality of pairs of plates in more than one location" recited nor described with respect to Figure 1.

Since the Patent Office bears the initial duty of supplying a factual basis supporting a rejection in a patent application, and the Examiner has not met this initial duty as described above, Applicants respectfully request the rejection of Claims 1 and 2 be withdrawn and Claim 1 and 2 now be passed to allowance.

IX. CONCLUSION

For the foregoing reasons, Appellants submit that the Examiner failed to establish a prima facie case of obviousness of Appellants' claimed invention in view of the cited references because the combination of cited references, when taken as a whole, fails to disclose or suggest the various limitations recited in Appellants' Claims 1 and 2. Therefore, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 1 and 2 under 35 U.S.C. § 103(a) and hold Claims 51 and 2 allowable over the cited references. Reversal of the rejection of all claims is earnestly urged.

X. APPENDIX

CLAIMS AS PENDING

1. A fuel cell system for a portable electronic device, comprising:

a fuel cell capable of operating on hydrogen that is obtained from methanol; and

a reservoir for storing a supply of methanol, suitably connected to the fuel cell, wherein a fuel quantity measuring means is located within the reservoir, wherein the fuel quantity measuring means comprises:

an immersion capacitive unit, wherein the immersion capacitive unit comprises a plurality of pairs of plates placed in more than one location within the reservoir, wherein the supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and

electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric.

2. A fuel cell system for a portable electronic device, comprising:

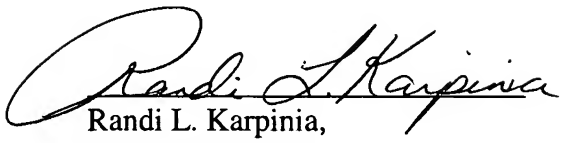
a fuel cell that operates on hydrogen obtained from a liquid hydrocarbon fuel; and

a reservoir for containing a supply of the liquid hydrocarbon fuel, said reservoir connected to the fuel cell, wherein a sensing means for measuring the amount of liquid hydrocarbon fuel that is present is located within the reservoir, wherein the sensing means comprises:

an immersion capacitive unit, wherein the immersion capacitive unit comprises a plurality of pairs of plates placed in more than one location within the reservoir, wherein a supply of methanol in the reservoir forms a dielectric between at least one of the plurality of pairs of plates of the immersion capacitive unit, and

electrical circuitry for measuring a capacitance value of the immersion capacitive unit produced using the dielectric.

Respectfully submitted,



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Mail Date: April 14, 2004

CERTIFICATE OF MAILING

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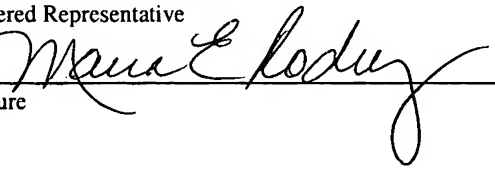

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